

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2004-18580; Directorate Identifier 2004-CE-12-AD; Amendment 39-13735; AD 2004-15-01]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Raytheon Aircraft Company Model 390 Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Raytheon Aircraft Company (Raytheon) Model 390 airplanes. This AD requires you to inspect the hydraulic tube/hose assemblies, the engine fuel feed tube assemblies, and the engine wire harnesses for proper clearance and damage (as applicable). If improper clearance or damage is found on any assembly, you must replace and/or modify the affected assembly. This AD is the result of reports of loss of the hydraulic system functions during different operations caused by improper clearance between certain components. This resulted in damage to the tubing in the hydraulic system assemblies. Analysis shows a similar condition on the engine fuel feed assemblies. We are issuing this AD to detect, correct, and prevent such damage or improper clearance in the affected areas, which could result in failure of one or more of these systems. These failures could lead to loss of hydraulic system operations, engine shutdown, and false readings for fuel pressure, oil pressure, and other oil indications. These conditions could consequently result in reduced or loss of control of the airplane.

**DATES:** This AD becomes effective on August 23, 2004.

As of August 23, 2004, the Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulation.

We must receive any comments on this AD by October 4, 2004.

**ADDRESSES:** Use one of the following to submit comments on this AD:

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001.

- Fax: 1-202-493-2251.
- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. You may get the service information identified in this AD from Raytheon Aircraft Company, 9709 E. Central, Wichita, Kansas 67201-0085; telephone: (800) 429-5372 or (316) 676-3140. You may view the comments to this AD in the AD docket on the Internet at <http://dms.dot.gov>.

**FOR FURTHER INFORMATION CONTACT:** James P. Galstad, Aerospace Engineer, Wichita Aircraft Certification Office (ACO), FAA, 1801 Airport Road, Wichita, Kansas 67209; telephone: (316) 946-4135; facsimile: (316) 946-4107.

#### **SUPPLEMENTARY INFORMATION:**

*What events have caused this AD?* Raytheon received reports of loss of hydraulic pressure on two Model 390 airplanes. One of the affected airplanes experienced a complete loss of normal hydraulic system pressure during flight. The other affected airplane experienced a loss of hydraulic pressure during ground operations.

Inspections of these airplanes revealed improper clearance between the hydraulic tube/hose assemblies and the engine inlet heat exhaust duct. Improper clearance between these two components resulted in chafing of the hydraulic tube assemblies. The chafing created a hole in the engine hydraulic tube and allowed hydraulic fluid to leak out. Loss of hydraulic fluid pressure resulted in the consequent loss of normal brake function, spoiler system, and normal landing gear operation.

Further inspections also revealed the following:

- Improper clearance between the left-hand (LH) and the right-hand (RH) engine fuel feed tube assemblies and the Hydro Mechanical Unit/Electronic Control Unit (HMU/ECU) interface electrical connectors; and
- Improper clearance between the engine wire harness and the engine lube oil cooler.

The analysis shows that the bend dimension of the LH engine fuel feed tube assembly was improperly defined during the production of some airplanes. This improperly-defined bend dimension allows for interference with the HMU/ECU interface electrical connectors. In addition, torquing the RH engine fuel feed tube assembly could cause interference with the HMU/ECU interface electrical connectors. Redesigned LH and RH tube assemblies are available for those airplanes found to have the improper clearance between the two components.

*What is the potential impact if FAA took no action?* These conditions, if not detected, corrected, and prevented, could cause the hydraulic tube/hose assemblies, the engine fuel feed tube assemblies, and the engine wire harnesses assembly to fail. These failures could eventually lead to reduced or loss of control of the airplane.

*Is there service information that applies to this subject?* Raytheon has issued the following:

- Mandatory Service Bulletin Premier SB 71-3648, Issued: November, 2003, which includes procedures for inspecting the hydraulic tube/hose assemblies and all adjacent components for proper clearance and damage and replacing any damaged parts and doing modifications if improper clearance is found; and
- Mandatory Service Bulletin Beechcraft SB 71-3659, Rev. 1, Revised: May, 2004, which includes procedures for inspecting the engine fuel feed tube assemblies for proper clearance and damage and replacing any damaged parts and doing modifications if improper clearance is found.

#### **FAA's Determination and Requirements of the AD**

*What has FAA decided?* We have evaluated all pertinent information and identified an unsafe condition that is likely to exist or develop on other products of this same type design.

Since the unsafe condition described previously is likely to exist or develop on other Raytheon Model 390 airplanes of the same type design, we are issuing this AD to detect, correct, and prevent damage to the tubing in the hydraulic system assembly, the engine fuel feed tube assemblies, and the engine wire harness, caused by improper clearance and chafing, which could result in failure of these systems. These failures could lead to loss of hydraulic system operations, engine shutdown, nacelle fire, and false readings for fuel pressure, oil pressure, and other oil indications. These conditions could consequently lead to reduced or loss of control of the airplane.

*What does this AD require?* This AD requires you to incorporate the actions in the previously-referenced service bulletins.

In preparing this rule, we contacted type clubs and aircraft operators to get technical information and information on operational and economic impacts. We did not receive any information through these contacts. If received, we would have included a discussion of any information that may have influenced this action in the rulemaking docket.

*How does the revision to 14 CFR part 39 affect this AD?* On July 10, 2002, we published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs FAA's AD system. This regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

## **Comments Invited**

*Will I have the opportunity to comment before you issue the rule?* This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2004-18580; Directorate Identifier 2004-CE-12-AD" in the subject line of your comments. If you want us to acknowledge receipt of your mailed comments, send us a self-addressed, stamped postcard with the docket number written on it; we will date-stamp your postcard and mail it back to you. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it. If a person contacts us through a nonwritten communication, and that contact relates to a substantive part of this AD, we will summarize the contact and place the summary in the docket. We will consider all comments received by the closing date and may amend the AD in light of those comments.

## **Regulatory Findings**

*Will this AD impact various entities?* We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

*Will this AD involve a significant rule or regulatory action?* For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "Docket FAA-2004-18580; Directorate Identifier 2004-CE-12-AD" in your request.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

1. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "[www.faa.gov](http://www.faa.gov)"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2004-15-01 Raytheon Aircraft Company:** Amendment 39-13735; Docket No. FAA-2004-18580; Directorate Identifier 2004-CE-12-AD.

## **When Does This AD Become Effective?**

- (a) This AD becomes effective on August 23, 2004.

## **Are Any Other ADs Affected by This Action?**

- (b) None.

## **What Airplanes Are Affected by This AD?**

- (c) This AD affects Model 390 airplanes, serial numbers RB-1, RB-4 through RB-84, RB-87, RB-89, RB-90, RB-93 through RB-96, RB-99 through RB-101, and RB-103; that are certificated in any category:

## **What Is the Unsafe Condition Presented in This AD?**

- (d) This AD is the result of reports of loss of the hydraulic system functions during different operations caused by improper clearance between certain components. This resulted in damage to the tubing in the hydraulic system assemblies. Analysis shows a similar condition on the engine fuel feed assemblies. We are issuing this AD to detect, correct, and prevent improper clearance in and damage to the components in the hydraulic system assembly, the engine fuel feed tube assemblies, and the engine wire harness. Improper clearance of damaged components could result in failure of one or more of these systems. These failures could lead to loss of hydraulic system operations, engine shutdown, nacelle fire, and false readings for fuel pressure, oil pressure, and other oil indications. These conditions could consequently result in reduced or loss of control of the airplane.

## **What Must I Do To Address This Problem?**

- (e) To address this problem, you must do the following:

<b>Actions</b>	<b>Compliance</b>	<b>Procedures</b>
(1) <i>For serial numbers RB-1, RB-4 through RB-15, RB-17 through RB-80, RB-82, and RB-84, do the following:</i> (i) Inspect the hydraulic tube/hose assemblies and all adjacent components for proper clearance and damage; (ii) Inspect the engine fuel feed tube assemblies and all adjacent components for proper clearance and damage; and (iii) If improper clearance or damage is found during either of the inspections listed in paragraphs (e)(1)(i) and (e)(1)(ii) of this AD, replace the affected hydraulic tube/hose assembly or fuel feed tube assembly.	Inspect within the next 25 hours time-in-service (TIS) after August 23, 2004 (the effective date of this AD), unless already done. Replace prior to further flight after the inspection where improper clearance or damage is found.	Follow the procedures in Raytheon Aircraft Company Mandatory Service Bulletin Premier SB 71-3648, dated November, 2003; and Raytheon Aircraft Company Mandatory Service Bulletin Beechcraft SB 71-3659, Rev. 1, dated May, 2004.
(2) <i>For serial numbers RB-16, RB-81, RB-83, RB-87, RB-89, RB-90, RB-93 through RB-96, RB-99 through RB-101, and RB-103, do the following:</i> (i) Inspect the engine fuel feed tube assemblies and all adjacent components for proper clearance and damage; and (ii) If improper clearance or damage is found during the inspection listed in paragraph (e)(2)(i) of this AD, replace the affected fuel feed tube assembly.	Inspect within the next 25 hours time-in-service (TIS) after August 23, 2004 (the effective date of this AD), unless already done. Replace prior to further flight after the inspection where improper clearance or damage is found.	Follow the procedures in Raytheon Aircraft Company Mandatory Service Bulletin Beechcraft SB 71-3659, Rev. 1, dated May, 2004.

### **May I Request an Alternative Method of Compliance?**

(f) You may request a different method of compliance or a different compliance time for this AD by following the procedures in 14 CFR 39.19. Unless FAA authorizes otherwise, send your request to your principal inspector. The principal inspector may add comments and will send your request to the Manager, Wichita Aircraft Certification Office (ACO), FAA. For information on any already approved alternative methods of compliance, contact James P. Galstad, Aerospace Engineer, Wichita ACO, FAA, 1801 Airport Road, Wichita, Kansas 67209; telephone: (316) 946-4135; facsimile: (316) 946-4107.

### **Does This AD Incorporate Any Material by Reference?**

(g) You must do the actions required by this AD following the instructions in Raytheon Aircraft Company Mandatory Service Bulletin Premier SB 71-3648, dated November, 2003; and Raytheon Aircraft Company Mandatory Service Bulletin Beechcraft SB 71-3659, Rev. 1, dated May, 2004. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may get a copy from Raytheon Aircraft Company, 9709 E. Central, Wichita, Kansas 67201-0085; telephone: (800) 429-5372 or (316) 676-3140. You may review copies at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

You may view the AD docket at the Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001.

Issued in Kansas City, Missouri, on July 13, 2004.  
Scott L. Sedgwick,  
Acting Manager, Small Airplane Directorate, Aircraft Certification Service.  
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